Montana State Library
3 0864 1006 7621 5

FRANK W. WILEY, Director

COMMISSION MEMBERS:
Alfred Klingler, Chairman
F. B. Cogswell, Vice-Chairman
Harold DeSilva, Secretary
H. L. Cummings
William J. Erickson
Charles Lynch
H. M. Hendrickson

Published by
MONTANA AERONAUTICS COMMISSION
P. O. Box 1698 Helena, Montana
Member of
National Association of State Aviation Officials

Vol. 9—No. 7

OCT–NOV., 1958

RESUME OF PUBLIC LAW 85-726

The Federal Aviation Act of 1958 was signed on August 23, 1958, by the President. Under the Act, the Civil Aeronautics Board is continued, the Civil Aeronautics Administration is abolished and in its stead, the Federal Aviation Agency is established. Although many parts of the Civil Aeronautics Act of 1938 are retained by reenactment, the essential change in the new law is that the safety rule-making powers of the CAB have been transferred to the new Agency. In connection with such rule-making powers, the Administrator of the Agency will have primary control of the Federal Airways system with respect to both civilian and military aircraft.

In addition, the new Act amends 14 other laws and abolishes two agencies—the Civil Aeronautics Administration and the Airways Modernization Board. Simplification and consolidation of agencies, authorities and functions are only one part of the new law. The FFA will also have new authority, particularly to control airspace, never before granted to any agency.

The Air Commerce Act, for example, gives the President power to control airspace for "national defense or other governmental purposes." The Civil Aeronautics Act adds to this the authority to control airspace for reasons of safety.

Under the new FAA, the authority is made all-inclusive. "The Administrator is authorized and directed to assign by rule, regulation or order the use of the navigable airspace under such terms, conditions and limitations as he may deem necessary," the new Act says. Reference in present laws to "civil airways" are changed to "federal airways" in the new Act.

To make certain that there isn't even an implied limitation, this airspace control authority was taken out of the section dealing with safety matters, and put in a separate section (No. 307) entitled "Use of Airspace."

Laws now in effect also have limited the airspace control authority to U. S. territory, and this has also been dropped in writing the new act. This means that air traffic rules can be issued for any airspace under the control of the U. S., even though it may be a U. S. protectorate, such as Okinawa, and not a part of the U. S. or its territories and possessions.

Significant new authority to control the use of federal funds for civil airports is included in the new FAA. In addition, and even more importantly, the FAA Administrator is given veto power over the establishment of military airports and missile bases. His veto may be appealed to the President, who can overrule him if the military make out a strong enough case.

Participation of the military in the operations of the new agency was one of the most controversial points decided by Congress. First version of the Act provided for an "advisor" to the Administrator. As finally passed, the Deputy Administrator of the new agency may be a military officer, either on active duty or retired.

IMPORTANT INFORMATION FOR ALL PILOTS

Civil Air Regulations, Parts 60.32 and 60.34, have been amended to establish new and simplified cruising altitudes designed to separate IFR and VFR traffic, and also traffic going in different directions.

Simply stated, the new regulations provide that aircraft being operated in level flight at 3000 ft. or more above the surface, VFR, shall fly at odd thousands plus 500 ft. if they are on a magnetic course between zero degrees and 179° (easterly), and at even thousands plus 500 feet when the magnetic course is 180° to 359° (westerly).

When flying IFR within controlled airspace, aircraft shall be flown at assigned altitudes. When IFR outside controlled airspace, they shall be flown at odd thousands between zero degrees and 179° and at even thousands when their heading is between 180° and 359°.

NOTICE TO AIRPORT MANAGERS

It is important that the Montana Aeronautics Commission receive any information about new highways, roads or tall structures which might interfere with airport operations or future airport expansion. Early notification will enable the Aeronautics Commission to start corrective action before agency property settlement and construction plans have progressed too far.

NATIONAL AVIATION EDUCATION WORKSHOP
Missoula, Montana, 1959

A National Aviation Education Workshop will be conducted at the Montana State University, Missoula, Montana, between the dates of June 29th and July 31st.

This Aviation Education Workshop for teachers will be sponsored by the Montana Aeronautics Commission, the State University, the Civil Air Patrol and the United States Air Force.

Teachers enrolled in this course will receive eight quarter credits for either graduate or under graduate study. The course will be particularly attractive to Montana teachers in that in one concentrated five week period, it will fulfill the requirements for renewing teachers certificates. Basic cost of the course will be $165.00 for room, board and registration.

The course will feature non-technical extensive study in aviation education and air space developments. The Workshop is designed to provide opportunities for curriculum development projects and to provide individual study under the guidance of nationally known aviation education curriculum experts. Special electives will include: Flight Instruction at Low Cost, The Latest Education Television Techniques, Classroom Radio and Journalism Techniques and Photography.

Optional field trips will be conducted each weekend including: A visit to the Boeing Aircraft Factory in Seattle; a group tour of Yellowstone Park; a group tour of Glacier Park.

The Workshop will attract educators from all parts of the United States, Alaska, Hawaii and Puerto Rico.

This National Workshop will give a big boost to interest in Aviation Education in Montana and will give Montana teachers an opportunity to participate in a National Workshop in which they will have contact with teachers from all parts of the country. The Air Force is planning on a special Aviation Day Program in which teachers will have the opportunity to view the latest type of military aircraft, both as a static display and in flight operations.

You, as a Montana pilot or flight operator, have an opportunity to materially increase aviation interest in your community by informing teachers in your Grade Schools and High Schools of this opportunity to attend this National Workshop here in Montana.

Montana pilots will be requested to assist in airlift operations and all aviation minded people in Montana will be invited to attend the annual Aviation Day Program scheduled for July 4, 1959, Missoula and sponsored by all Missoula Civic and Aviation groups.

1958 ANNUAL CONVENTION
MONTANA AVIATION TRADES ASSOCIATION
BILLINGS, MONTANA, DEC. 5th and 6th

The annual meeting of the Montana Aviation Trades Association will be held in Billings, Montana, at the Northern Hotel on December 5th and 6th.

The program will start promptly at 9:00 a. m. on Friday morning and it is suggested that you make your reservations at the Northern Hotel for the night of December 3rd.

This year's convention will have an outstanding program for Montana Flight Operators.

One-half day of the program will be devoted to agricultural subjects with Mr. Fred Wieck, formerly of Texas A. & M. and now with the Piper Company, who will talk on the subject of spray patterns and aerial application.

One section of the program will be devoted to aircraft sales and service and another section to aviation finance, with a coverage of business principles by a prominent Montana bank representative.

Representatives of the State College will participate in the agricultural program and Mark Ratcliffe of the Montana Aeronautics Commission will cover Montana airport development and the financing of hangars through the Small Business Administration.

It is more important to you now than ever before as a Montana Flight Operator to attend this annual meeting of the Montana Aviation Trades Association and to support your Association at a State and National level.

NATIONAL ASSOCIATION OF STATE AVIATION OFFICIALS

PURPOSE.—"To foster aviation as an industry, as a mode of transportation for persons and property and as an arm of the national defense; to join with the Federal Government and other groups in research, development, and advancement of aviation; to develop uniform aviation laws and regulations, and to otherwise encourage co-operation and mutual aid among the several states."

"THE TIME WHEN I"

When pilots gather it is inevitable that each tries to outdo the other in telling about the accident that nearly happened.

It may have been about weather, reckless flying, or getting lost in the mountains. To the earthbound listener all this suggests that flying is inherently dangerous, that trouble is inescapable, and that one takes a calculated risk every time he or she leaves the ground.

On the other hand, if the listener is an embryo pilot, he may get the idea that only bold pilots are good pilots, and that the important thing about flying is getting through weather, or some other emergency that requires a sublime indifference to danger as well as piloting skill.

NOTHING CAN COME FROM BOASTING ABOUT THE THINGS YOU'VE GOTTEN AWAY WITH. If you can't relate an experience in such a way as to prevent others from making the same mistake, don't talk about it at all.

Another closely related subject is that of the "show-off" pilot taking his "first ride" passenger through a lot of unnecessary maneuvers which destroy confidence.

To a person who has never been off the ground, flying still appears to offer an unusual number of hazards. Statistics mean nothing to them. The very first ride is usually the one that formulates a lasting impression with the layman. This first ride is usually the deciding factor in determining whether he or she will be an advocate for or against flying.

We agree you can "shine" a little, but it's wrong to assume your passenger is appreciative of your ability while rattling around like a pea in a New York traffic cop's whistle. Let's encourage flying—not discourage it.

AIRLINES TO AID IN STAPLETON AIRFIELD EXPANSION

Denver City Council has tentatively approved a plan whereby the airlines would be asked to contribute $26,000 toward construction of a jet runway at Stapleton Airfield. The plan has been proposed as an alternative to increasing landing fees which the city has under consideration. An additional $32,000 in federal aid funds would be forthcoming from the CAA, according to Mayor Will F. Nicholson.

The $26,000 contribution would be pro-rated among the airlines on the basis of gross weights operated by each company during the past years. Payments would be made over the next 12 months and the money advanced subtracted from landing fees charged by the city.

The city's financial plight stems from its inability to move on a proposed $20 million bond issue to expand airport facilities due to a controversy with the Air Force over use of Rocky Mountain Arsenal land. All versions of the airport expansion program call for extension of the N/S runway into arsenal land on which the AF plans to build a $65 million nuclear power aircraft engine research and development laboratory. The revenue bond issue would have to be submitted to voters.

NORTHWEST GIVES DETAILS OF EQUIPMENT PROGRAM

Northwest Airlines has confirmed that it is buying five Douglas DC-8's and ten Lockheed Electras (DAILY, April 30), and that it will trade in or sell to Douglas Aircraft Co. five DC-7's and to Lockheed Aircraft nine Boeing Stratocruisers.

The contract with Douglas was signed in July and deliveries of the DC-8s will take place from March through September, 1960. Cost of each jet airliner to Northwest is $5,780,000 with the total price being $37,845,000, including engines and spare parts. Douglas will either accept on trade-in or purchase five DC-7s at a unit cost of $1,350,000 or a total of $6,731,000, including spares and equipment.

The deal with Lockheed was signed in May. Cost of each Lockheed L-188A Electra will be $2,400,000 and the total outlay for the 10, plus spares and equipment, will be $29,654,000. Lockheed will accept on trade-in or purchase the nine Stratocruisers for $3,500,000 or $390,000 each. Deliveries of the Electra will take place between July and December, 1959.

Both the Northwest DC-8s and Electras will have range-increasing modifications (DAILY, June 20, Sept. 17). The DC-8s will be modified to carry 1,380 additional gallons of fuel by including fuel tanks in a new wing leading edge to the fuselage fillet. Present planned configuration for the jets is 42 first-class and 84 tourist seats. Maximum gross takeoff weight is 310,000 pounds.

The Electras will have additional fuel capacity to give them true transcontinental capability (DAILY, Sept. 17). Some 900 gallons of additional fuel will be carried in fillet tanks. Takeoff weight will be 116,000 pounds.

PILOT TO PASSENGERS
Bumpless Airline

"As we cruise along with all the comforts and safety of home at 240 miles per hour in smooth air, it is difficult to conceive that just a few short years ago our grandparents traveled for months to complete the same journey we are making in hours, etc., etc."

Those below now considered the amazing progress made in transportation and listened attentively as he concluded.

"Now, if you ladies and gentlemen have any questions regarding our route or the operation of this magnificant aircraft, please feel free to ask and we will do our best to satisfy your curiosity."

From out of the blackness and far away came an anxious query:

"Captain," it asked, "WHAT MAKES IT FLY?"

There was no answer.

V. A. REVISES TIME LIMITATIONS ON G. I. TRAINING

The office of the Montana Aeronautics Commission has been advised by Allen C. Hanson that a new V. A. Regulation pertaining to COMMENCEMENT TIME LIMITATION is now in effect.

Korean Veterans interested in G. I. training under Public Law 550 are advised to check with the V. A. at Fort Harrison on the re-entrance requirements.

DOES THE SWITCH SHUT OFF THE ENGINE?

Well, yes, it is supposed to. But with the common practice of shutting off the engine by pulling the mixture control, it would be possible for the switch to keep the engine hot all the time without the pilot knowing it. While the switch is checked at least every 100 hours, we would like to suggest that pilots check their switch occasionally during the run-up by turning the switch to the "off" position while the engine is at idle. (Any power more than idle could cause severe backfire.)

It is not how well you can fly—It's how well you do fly that counts!

SURVIVAL IS STRICTLY PERSONAL

We have just read a very interesting, informative, brief and basic pamphlet titled "Survival Is Strictly Personal." This small gem of survival lore takes you from the first indication that you are going to be in an embarrassing position to the point of living off the country as though you were putting up at the Hollywood-Roosevelt with unlimited room service once you have found yourself a subject for the Air Search and Rescue team. This pamphlet is good reading, even if you never leave the pattern at your home base. Written by Tom Tretheway of A and M Industries, P.O. Box 12, Boeing Field, Seattle, Washington, and to the best of our knowledge available on request.

IT'S HOT AND DRY OUT THERE

"Desert Survival" is the title of an excellent booklet published by the Phoenix Joint Council Civil Defense. It is highly recommended to pilots who fly the desert areas of California. It should be included in the safety equipment carried in the aircraft. Copies are available from the above agency at 2035 N. 52nd St. Phoenix, Arizona.

TOWER TIPS

A pilot on a VFR flight about to enter the control zone for a landing at an airport encounters weather conditions that are less than VFR minimums or is informed that weather at the field is IFR. There are several courses of action open to a pilot in these circumstances.

Call Approach Control or the Tower and advise them of your predicament and secure from them latest weather information and proper clearance.

Call Radio (the ATCS station) if you cannot contact the Tower or Approach Control.

Remain outside the control zone and away from ILS courses and other approach paths until you receive a clearance from Approach Control or the Tower to proceed to the field.

Check your radio facilities charts and approach charts for information on proper radio frequencies, the location and control zones and navigation and approach aids which serve the airport so that you steer clear of them under these conditions.

Consider landing at an outlying airport outside the control zone if you are unable to establish or maintain radio contact or if you encounter weather conditions which are bad enough that continuing to the airport is not feasible even though a clearance may have been received.

Remember that Approach Control and the Tower are there to serve you and will help you effect a safe landing. A FEW WARNINGS ARE:

DON'T "drive" into the airport pattern unannounced.

DON'T "sneak" into the field by following the ILS course or the Range Station leg without a clearance to do so.

DON'T fly around the ILS courses or other approach path areas trying to find a spot through which to proceed to the field.

DON'T be too proud to ask for assistance.

DON'T forget other aircraft are making instrument approaches and may be unable to avoid a collision if you are in the area without proper air traffic control clearance.

PROGRAM OF TEACHER FLIGHTS

Enthusiasm in presenting aviation in the classroom is directly proportional to the teacher's own experiences. A vital activity in aviation education is flight experience for educators. During the past year, nearly two hundred Montana teachers were given orientation in the air through cooperation of the Montana Pilots Association, Montana Flying Farmers and Montana operators. The flights were in conjunction with Teachers Aviation Clinics, Aviation Education Workshops, The Montana State University Conservation Workshop and Montana Education Association Fall convention at Missoula. The Flying Farmers are providing flight for teachers in each town where their State meetings are held.

Eduction Materials

Montana teachers may obtain aviation materials without charge from the Montana Aeronautics Commission. A new booklet "The Space Frontier" presents many of the known facts of space and the problems man faces as he reaches for the stars. It contains an astronautics glossary to assist the space-minded educator.

GRUMMAN'S AGRICULTURAL BIPLANE MAKES FIRST FLIGHT

First flight of the first production model of Grumman Aircraft Engineering Corp.'s new agricultural biplane was announced in Elmira, N. Y. October 22nd. The flight of the "Ag-Cat" was made October 17th at the facilities of Schweizer Aircraft Corp., subcontracting producer of the Grumman plane.

The Ag-Cat features the interchangeability of upper and lower wings and all four ailerons, spring-steel landing gear and a sloping nose that affords excellent visibility in flight attitude. Its airspeed indicator and engine tachomoter are placed forward of the cockpit on a separate panel to minimize the pilot's eye-focusing problem when flying close to the ground, as in spraying or dusting operations.

Travel through the air is not in itself inherently hazardous, but like the sea, and to a greater extent, it is terribly unforgiving of errors in judgment.

VMC AND THE LIGHT TWIN AIRPLANE

By George E. Smith, Supervising Inspector

All of the light twin airplanes will do an excellent job of flying for its owner. But like any airplane it must be flown with an understanding of and a respect for its limitations. This lack of understanding an airplane's limitations is one of the factors, which often gets a pilot into difficulties. Someone has said that "What you don't know won't hurt you." What he should have said when speaking of airplanes is "What you don't know won't hurt you—it will kill you."

One of the least understood terms and its significance in connection with the safe operation of light twin airplanes is VMC. VMC can be defined as "The minimum air speed at which the aircraft is controllable when the critical engine is suddenly made inoperative, with the remaining engine at take-off power."

The Civil Air Regulations, Part 3, which governs type approval of these airplanes, say that, at this minimum speed, you must be able to do two things. First, you must be able to stop the turn which results when the critical engine is "chopped" and you must be able to stop it within 20° of turn; and second, you must be able to fly away on the new heading without holding the wing down more than 5° on the good engine side without using more than 150 lbs. of rudder force on full rudder if it is obtained first. This C. A. R. part also requires that VMC must not be greater than 120% of the power-off stall speed. However many of our light twins in use were designed when the limiting value was 130%. Even so, these VMC speeds are normally above the speed given in the Airplane or Owner's Operating Manual for best angle of climb speed when both engines are operating at take-off power. A typical example is that of a plane whose best 2-engine angle of climb speed is 75 m.p.h. and whose VMC is 85 m.p.h. There are, of course, planes with a wider spread than this.

In testing for VMC (minimum control speed), the airplane was set up at some relatively high speed, gear up. The throttle was closed on one engine and with take-off power on the other, a wing down on good engine side five degrees, the airplane was slowed down until it could just be held straight with full rudder. One of the questions which invariably comes to mind, is why is VMC determined with gear up. Since everything else is set for take-off—wing flaps, cowl flaps and power—why is the gear retracted? The answer is that while this condition of low speed might occur in flight just after take-off with the gear still down, it might also occur just a little later with the gear up—and this would be more critical, since the extended gear would have a stabilizing effect when the engine failed. In other words, VMC is established in the most critical condition. Of course, if the test pilot found, on a particular plane, that gear down was most critical, the limitation would be so established and the fact would be put in the Airplane Flight Manual.

Most all the popular light twins, just naturally want to "sneak off the ground" well below VMC. Some planes when put at just the right angle will leave the ground a considerable number of MPH lower—and pilots have been flying them that way for years. When a pilot takes off and climbs out over obstacles at this low speed, he will obviously obtain the steepest angle-of-climb possible. However, if an engine should fail under these conditions—10 m.p.h. or more below VMC, and in a steep climbing attitude—he is immediately in bad trouble. We do not say that you should never do this—or tell a student never to do it. We would do it if the circumstances forces us to—but we would do it with the understanding of the inherent dangers—and not as a standard take-off procedure.

There is another take-off procedure—generally recognized as standard for normal take-offs, that goes something like this. "Raise the nose wheel from the ground as you approach flying speed, and after take-off **level off just above the runway** and accelerate to VMC."

When a plane is on the ground, the pilot has ground control in the event of engine failure, through the use of steerable nose wheels, brakes, etc.—and when it is in the air above VMC he has air control. In view of this question the logic of giving up ground control before getting to a speed (VMC) at which air control is available in the event of an engine failure. Of course, this procedure just mentioned would be correct for take-off from a rough, muddy, or gravelly field, and I would use it under those circumstances accepting the risk involved. But I don't think it wise to use this as a standard "every day" take-off procedure.

Now as to the other aspect of the "so-called" standard procedure, i.e., the take-off below VMC and accelerating just above the ground to VMC. At our Aeronautical Center in Oklahoma City, we set up a "sighting bar" to measure angles and heights to compare various types of take-offs. With this bar set at one side of the runway and 1,500 feet from start of take-off, we would leave the ground and climb out of the theoretical 1,500 foot field at 75 m.p.h.—best angle of climb speed for the airplane used. The take-off was repeated, leaving the ground at VMC and climbing out just above that speed. The difference in height attained at 1,500 feet down the field was so slight as to be negligible—in fact, if that much difference were needed to clear the trees, I personally would take a very dim view of flying out on the field at all!

What to do about all this? I believe we should accept the possibility of an engine failure somewhere in the take-off procedure, and plan our take-off accordingly. I suggest that the standard take-off procedure should go something like this: "On the take-off run, keep the airplane on the ground until you have reached the VMC speed, then lift the airplane off the ground and climb out at VMC or slightly above if a steep angle of climb is needed. If the angle of climb is not a critical factor climb at VMC plus 10 miles per hour until you reach an altitude of 400-600 feet, then allow airspeed to build up to the best rate of climb." More about this later.

Another point about the take-off—many pilots we have observed, sit with the seat so far back (for comfort reasons?) that they could not reach full rudder in case of an engine failure. The seat should be adjusted so you can obtain full rudder travel—you might just need it! And another thing—most pilots think primarily of controlling the plane, following engine failure, with the rudder. It has been our experience that using the aileron against the turn—and using it immediately—is one of the best solutions to stopping that yawing turn. Remember, if you are at or above VMC, the wing has not stalled—your speed is at least 120% above the power-off stall speed.

Take-offs require planning—but I do not mean they require any highly complicated procedure. I think of this planning in terms of "using a little common sense, something on the order that "old timers" used with single engine airplanes twenty years ago. For instance, if you started on XC—and suddenly found a wide swamp on the map with the pencil line right down the middle, you don't fly there just because the mark was there—you skirt edge in gliding distance of some fields, and out across the swamp at its narrowest point. That is the kind of planning and thinking I mean.

The climb-out path should, of course, be made so that you will miss all obstructions—but just what does this mean? In my thinking anything between where you sit, **at the T/O end of the runway and getting back to that same place with an engine out** is an obstruction—and should play its part in your planning. Obviously, such a concept means that each airport, being different, will demand some variation of the basic procedure.

There are an infinite number of take-off and climb-out procedures available—so let's analyze the extremes. First, how about the one in which we leave the ground, "hold 'er down" and go over the far end of the runway at about cruising speed with about 30 feet altitude? If we are going to admit the possibility of an engine failure somewhere in this procedure, it doesn't make much sense. Drag increases as the square of the speed, and the faster you are going, the greater the drag of that dead propellor. At 123 m.p.h. the drag is 1½ times that at 100 m.p.h.—at 141 it is doubled. The pilot can suddenly discover he has converted all the energy produced by his engines into speed, and that this speed deserts him immediately. Of course, there is the argument that you can use this speed to "zoom" up—but we find that an unexpected engine failure leaves the average pilot feeling like he is "swimming around in glue" for a few seconds. By the time he has control of the situation and is ready to use the speed, he finds himself down to about the speed at which he should have been all along—**but still at 30 feet!** From this point he will have to climb—with an engine out—to whatever height is needed to clear the obstructions at this particular field and get back to the T/O end of the runway.

In other words, we have found that speed cannot readily be converted into altitude to help you around the field. On the other hand, a light twin will fly level on one engine far easier than it will climb. If, therefore, the energy of all engines has been converted into enough height above the field elevation to permit you to clear all obstructions in level flight, the problem is much simpler. Further—if some extra height is available, it can be traded for some speed. This is the same type reasoning that we always used for single-engine planes, and we feel that the light twin take-off might well be patterned after that found logical for single-engine planes—**except don't fly below VMC!**

Having concluded that a certain amount of height based on local conditions, is desirable early in the take-off climb, the procedure for getting it safely must be determined. Of course, a take-off and climb at best angle of climb speed would get the most height in the shortest distance—but remember VMC! Going to a climb speed well below VMC would be trading the possibility of a high-speed crash for the opportunity to practice spins at low altitude. Leaving the ground at a speed no slower than VMC and climbing at a speed slightly above VMC until some predetermined altitude has been reached is a much safer procedure. Obviously, if the climb is prolonged and/or the weather is particularly hot, engine temperatures must be considered. For example, at Sky Harbor Airport, we are fortunate in having almost no high obstructions immediately adjacent to the field, yet the height to which we would go immediately after T/O would be about 400 feet above the ground. At this point we would ease the nose down and let the airspeed climb smoothly to the best-rate-of climb speed. Then at the end of the maximum time permitted (usually one minute) we make the first power reduction. There is another plus factor in this procedure, too. Statistics show that the largest percentage of power failures occur during a power change. So, with this sea-level type engine, why change power until you have the desired altitude?

Now in view of the foregoing, I suggest that the standard take-off and climb-out procedure for light twins should be something like this: On the take-off run, keep the airplane on the ground until you have reached your VMC speed, lift off at or **slightly** above VMC. When obstructions are ahead climb at VMC or slightly above, otherwise climb at VMC plus 10-15 m.p.h. to the planned altitude, at this point ease the nose down and let the airspeed climb smoothly to the best rate-of-climb speed. Then, at the end of the maximum time permitted (usually one minute) make the first power reduction.

—Arizona Aviation

MENTAL WINTERIZATION

Engines are hard to start and airplanes are hard to stop.

Use carburetor heat and watch for ice in gas sumps.

Don't attempt to fly with snow or ice on your wings.

Keep plenty of reserve fuel for unforeseen change in weather and destination.

Know the weather and field condition at your destination.

Remember, the days are short. Keep an alternate in mind, and in contact flying, watch the weather behind you.

The depth and condition of the snow on the airport are critical factors.

Visibility is unpredictable and remember that you don't HAVE to get there.

MONTANA AERONAUTICS COMMISSION

Film Service

Give us two weeks notice and indicate your second choice in writing for the following films which we will loan you for showing to your Service Club, Pilot Group, or School Group.

Montana and the Sky;
Airport America;
Flying Business Man;
Flight Decision;
To Save a Life;
Take the High Road;
Man In Space.

WEATHER HAZARDS

THUNDERSTORMS and TORNADOES frequently accompany cold fronts and squall lines. The best advice on thunderstorm flying is DON'T DO IT! This is especially important if a thunderstorm is in progress in the vicinity of the airfield during anticipated takeoffs or landings. Several very disastrous aircraft accidents have occurred when aircraft have taken off into thunderstorms. If you have to fly through thunderstorm areas, your radar, if you have it, can aid you in selecting the best flight path to avoid the strongest echoes.

MOUNTAIN WAVES can be expected on the downwind side of mountain ranges when the wind flow is perpendicular to the axis of the range and wind speeds exceed 25 knots at mountain-top level. Mountain waves can usually be recognized by distinctive cloud formations. However, at times when air masses are exceptionally dry, mountain waves may be cloudless.

The most dangerous features of the mountain wave are the combination of downdrafts, jet-like winds, horizontal turbulence, and altimeter errors. These DANGERS cannot be stressed too highly. Pilots, even those with considerable experience, should avoid direct flight through a full scale mountain wave, either by circumnavigating the area, delaying the flight or flying at extremely high altitudes. An example of the extreme turbulence which may be encountered in mountain waves occurred when a sailplane which was stressed for 14 G's was torn apart in a wave cloud. The pilot bailed out but was injured.

ICING is always hazardous and can be expected frequently from late fall through early spring. You may expect icing any time you are flying above the freezing level and clouds, rain, drizzle or wet snow are present. Ice can accumulate rapidly in freezing rain. To avoid freezing rain climb into the warmer air which may be found above the frontal surface, or descend to a lower level if it is known that the temperatures are above freezing at the lower level, and if you know there are no terrain obstructions.

The weather forecaster has many facilities available to him which indicate areas of probable ice formation. By consulting the forecaster you can plan your best route and altitude to minimize or avoid the icing hazard.

JET STREAM wind speeds on an average are strongest in winter and weakest in summer. The jet stream can be pictured as a narrow river of winds at altitudes generally about 25-35,000 feet moving around the temperature zone in a wave-like pattern embedded in a normal wind flow aloft.

Generally, as many jet streams occur during summer as winter. However, they have a seasonal north-to-south shift and are most frequently encountered in temperate latitudes in winter (they move north in summer and south in winter).

As a rule the jet stream is composed of winds between 100 and 150 knots and in extreme cases 200 to 250 knots or more. The wind speeds outward from the core of the jet stream may drop off as much as 100 knots in 100 miles north of the stream, and as little as 25 knots in 100 miles of its southern edge. The change of speed with height is also very marked. A decrease of 30 to 40 knots in 1000 feet above or below the core of the maximum winds is not uncommon. This is a well-defined characteristic of the jet stream and is of great significance. For instance, if a pilot finds that he is in the jet stream and is fighting an adverse head wind, he should climb or descend toward the cold air (polar side).

CLEAR AIR TURBULENCE may be caused by various factors. Convective currents (unequal surface heating) may cause considerable turbulence over southwestern desert areas, especially during summer. Pilots may find that at times they will be required to hand fly their aircraft and frequently adjust air speeds. Clear air turbulence and up and down drafts can be severe near thunderstorms. When high gusty surface winds are reported or there is a temperature inversion, or when there are nearby topography factors such as cliffs, hills, or mountains, anticipate wind shear or turbulence.

Marked changes in wind velocity at altitude result in turbulent air. The degree of turbulence to be expected depends on amount of change in wind speed turbulence at high altitudes in the vicinity of the jet stream. The wake of an aircraft also can cause severe turbulence. Don't follow too close to aircraft landing or taking off.

ALTIMETER SETTING ERRORS ARE A REAL HAZARD. On cross-country flights, surface pressures may change rapidly. An incident caused by this factor occurred recently. A pilot took off from an east coast base on a cross-country flight to a midwest destination. He failed to reset his altimeter before beginning an instrument approach and sideswiped a tree. Miraculously, he was able to accomplish a landing on a runway. MAKE SURE YOUR ALTIMETER SETTING IS CORRECT—AT ALL TIMES.

AIRCRAFT ACCIDENT ANALYSIS

A CAA Accident Analysis includes information on aircraft accidents in Montana during the calendar year 1957 in which there were fourteen major accidents with five fatalities and one serious injury. There were nineteen minor accidents.

The major causes of accidents were stalls and collisions with objects on the ground. The third most prevalent factor was landing accidents.

The five fatal accidents involved agricultural aircraft with stalls in the turn as the common factor.

It is important and imperative that you keep in mind the "Gs" in a turn which can easily double the load of an airplane and raise the stalling speed. Temperature and altitude are important variables which have an influence on aircraft performance.

He: "Why does a woman say she's been shopping when she hasn't bought a thing?"

She: "Why does a man say he's been fishing when he hasn't caught a thing."

"I think my wife is getting tired of me," said one man to another.

"What makes you think so?" inquired his friend.

"Well," was the reply, "every day this week she has wrapped my lunch in a W.A.C. map."

YOU PAY FOR IT—GET YOUR MONEY'S WORTH

Many times the weather flight briefer gets phone calls from pilots requesting weather at destinations without letting the briefer know they are pilots. Often when the pilot visits the weather station he does not request the entire weather picture for a proposed flight. Why—all the information is there for him to see. Is he in too big a hurry? Doesn't care? Afraid to ask for weather? Perhaps many other reasons. Too often the pilot calls the weather station and requests weather at destination only, not telling the briefer that he is a pilot. What is the forecaster to assume? This guy is curious about a certain point just for kicks—he is driving there?

Naturally, the forecaster will render the latest weather at the station the pilot has requested. Many times this is all the weather briefing the pilot gets. Why? Let's examine what a pilot should do when attempting to gain adequate weather for a proposed flight. A call is made to the nearest weather station—Hello, I am a pilot of a Cessna 180 and I would like to depart for LAX at about 0700 PST, VFR if possible, with a gas stop at Bakersfield. What is the current weather at reporting stations along the airway to LAX, 12-hour terminal forecasts and upper winds? Then the forecaster has the picture of the flight desired and the wheels of briefing are set in motion. If the pilot is returning the next morning he should request a 24-hour outlook for this flight, also. Here is a "weather-wise" pilot. The pilot that does not get the whole picture is a statistic going somewhere to happen. The weather can be of great assistance to the pilot when used properly and the reverse is very true when he is not briefed.—Calif. AC.

JOINT USE OF RADAR FOR AIR TRAFFIC CONTROL

The Civil Aeronautics Administration and the military have completed a joint use program under which each will share the other's radar facilities for use in air traffic control. The program, announced by CAA Administrator James T. Pyle in Washington, and Lt. Gen. J. H. Atkinson, ADC Commander in Colorado Springs, Colo., is expected to be put into effect this fall and involves initial joint use of 31 new high-power, long-range radars for air traffic control by CAA as well as for air defense by the Air Force, Army and National Guard. More will be added in the future.

PILOT PAY SCALES

What do airline pilots earn a month? Salaries vary from airline to airline, but the recent pacts signed by National and Continental Air Lines with the Air Line Pilot's Association are in line with other contracts. The figures below are based on them and are for eight and nine-year first pilots and copilots flying 85 hours a month, half day and half night.

Aircraft	First Pilot	Copilot
Douglas DC-3	$1,216	$ 792
Convair 340	1,403	887
Douglas DC-6	1,603	990
Lockheed L-1049H	1,734	1,079
Douglas DC-7	1,825	1,102
Vickers Viscount 810	1,759	1,068
Vickers Viscount 840	1,845	1,113
Lockheed Electra	1,882	1,156
Douglas DC-8	2,235	1,340

From the above it can be readily ascertained that a position as a pilot for a major airline is a well paying proposition and certainly warrants looking into as a career for many young Americans who are interested in an exciting and secure future.

PLANE BOOSTS BUSINESS

A Seattle plastering contractor has increased his range of operations by 200 per cent, and still has his crews and himself home for dinner every night. Bob Morgan accomplished this through use of a four-seat executive aircraft and now handles jobs up to 300 miles distant from his Seattle base. The jobs he and his men flew to last year represented about $300,000 worth of business.

FCC AMENDS PART 9

To facilitate aircraft inspection to determine compliance with radio station licensing requirements, Part 9 of the Commission's rules is amended to read.

"9 118 (b) The current authorization for an aircraft radio station shall be posted prominently in the aircraft or shall be kept with the aircraft registration certificate. In the case of air carriers licensed by means of a single authorization for the operation of all fleet aircraft, the original authorization for the operation of all fleet aircraft, the original authorization, or photocopy thereof, shall be posted prominently in the aircraft or shall be kept with the aircraft registration certificate."—Mo. Avn. News

It's almost a sure bet that an atomic-powered ramjet will be the first nuclear device to power an airborne vehicle. Atomic Energy Commission experts believe it will precede the atomic rocket engine and will be considerably ahead of a reactor-powered jet.—Am. Avn. Daily

TWA Stewardess, as plane taxied up to airport to discharge passengers.

"This has been the safest part of your trip. Please drive carefully for a safe trip to your destination."

GEOLOGY FLIGHT

Over 30 science teachers attending the Montana Education Association Western District Convention at Missoula took a geology flight—something new for an MEA meeting. The teachers heard a geology lecture on the Intercom while flying over the area between Missoula, Flathead Lake and Plains, Montana, with explanations of the terrain changes which have occurred there during the past million years. The Missoula Hangar of MPA, Montana Flying Farmers and Montana Aeronautics Commission cooperated to provide the flight in 12 planes.

MONTHLY REPORT BY THE DIRECTOR
November, 1958

Montana Local Service Case

Henry Loble, Commission Attorney and Bert Cummings, Commission member, attended the oral hearing scheduled by the examiner on the Montana Local Service case on October 13 in Washington, D. C. Representatives of several Montana Communities attended and Henry Loble represented the Commission before the CAB examiner. It will probably be several months yet before the CAB renders a decision on this case.

Rock Creek Emergency Landing Strip Dedicated October 12, 1958

The Director and Airport Administrator flew to Rock Creek on October 12 to attend a breakfast flight in dedication of the Rock Creek emergency landing strip. There were fourteen aircraft at the breakfast which was sponsored by the Missoula Hangar of the Montana Pilots Association. Attendance was limited in view of the unsuitable weather in the Missoula area. This strip is now completed except for the tie-down receptacles. Frequent use has been made of the strip by aircraft which could not get into Missoula due to Fog conditions.

Airway Beacons

Two surplus airway beacon towers and accessories have been procured from the CAA with these being dismantled on the mountain top and trucked to an accessible loading spot, from beacon cities located between Missoula and Superior and immediately west of Spokane.

Whitehall CAA Emergency Field to Be Discontinued

Montana representatives in Washington have been advised by the CAA that plans call for the discontinuance of the Whitehall Emergency Field and air traffic control facilities at the end of the fiscal year. Action has been taken by this office to strongly recommend the continuation of the Whitehall facility by the CAA. However, no consideration has been indicated by the CAA on these recommendations.

Air Traffic Control Personnel Familiarization Flights

The Director flew a group of Helena Air Traffic Control people to several airports in the Helena area for the purpose of familiarizing them with emergency facilities in event pilots who need assistance may desire specific information on the nearest airport. It is planned to encourage this project and encourage flight operators to take CAA air traffic personnel with them when visiting landing fields in their areas of operation.

Search and Rescue Conference, San Francisco, Dec. 5, 1958

Approval for out-of-state travel was requested by the Director to attend a conference on Air Search and Rescue which is being sponsored by the CAA and the 4th Air Force and which will be at Hamilton Field on December 5 and 6. Directors of Aeronautics of the Western States have been invited to attend this convention.

Kalispell TVOR

Kalispell County airport board has advertised for bids for the construction of a TVOR station. It was recommended by this office that the bid specifications include provisions that the equipment meet the requirements of the CAA technical standard order N-27. The equipment manufacturer protested this provision and the Director contacted Mr. James Murphy, Chairman of Flathead County airport board and recommended that no deviation be made from the specifications when the bids were opened. Mr. Murphy was in agreement that the specifications should be adhered to and it is believed that the bids were rejected upon the first opening. The CAA engineers have completed the survey for the TVOR location and further progress on this project will be reported to the commission at a later date.

Helena Aviation Trade School

The Director met with Bryant Anderson, Chairman of the Helena Chamber of Commerce education committee to discuss action to be taken to stimulate a larger enrollment in the Helena High School Aeronautics Department located on the Helena Airport. It was agreed that. The name should be changed, that it would be desirable to have the High School faculty give active support to the school, and that suitable legislation on the student transfer procedures by County High Schools would make this excellent aviation facility available to more Montana High School students.

Dell Flight Strip

The Director again brings up the subject of the Dell Flight Strip. This office has been advised by the State Highway Department that the Bureau of Public Roads has informed the Highway Department that the Dell Airport will be turned over to the Federated General Services Division for disposal unless an indication is received by November 1 that interest is indicated by some other agency in taking over the operation and maintenance of this airport. Letters protesting the action have been received from pilots in the Dillon area indicating activity in the use of this airport and recommending that it be continued in operation. Instructions in this matter are requested from the Commission.

Montana Education Association

Aviation Education materials and information were displayed at Montana Education Association district conventions in Great Falls and Missoula. The October issue of the Montana Education Association Journal featured a story by A. R. Oja, editor, entitled "To learn about aviation education, you've got to fly." The story, with pictures, covered a trip by air to Libby to interview Wm. Erickson, Clarence Anthony and the administrator concerning the aviation education program and explained the activities of the Education Division.

Airport Projects

Dillon Project. The preliminary surveys, base design and master plan for the new Dillon airport runway have been completed. It is planned to have necessary data for a project application completed by November 15, 1958.

Canyon Ferry Project. The base project has been completed and is now open for light aircraft. The runway is 75' wide and 2600' long. It is marked and a wind cone installed. Plans are being made to have the Montana National Guard Engineer unit extend the runway 1400' to the north and haul in the surfacing aggregate during their encampment next spring.

Superior Airport. Several meetings have been held between the administrator, CAA engineers and personnel of the Montana Highway Commission, Interstate Division, to coordinate plans and specifications for the new Superior airport. Highway engineers are presently drawing up plans and specifications and when completed will turn them over to the Commission of Mineral County to open bids sometime this spring. The new site will be much better than the existing airport in many ways. The new runway will be designed with a stabilized base, better approach zones and will be 300' longer than the existing runway. To bring the lighting up to CAA standards approximately six additional runway lights will have to be installed for which the Highway Commission is not obligated to furnish funds. As their agreement calls for an equal to or better facility before a right of way will be granted for the existing site. It is anticipated that Mineral County will request assistance from the Aeronautics Commission to install the additional lights which are estimated will cost about $500. A meeting will be held in the near future with the Mineral County Commissioners to discuss this matter.

Malta Project. The administrator has attended several meetings with Morrison-Maierle, Inc., consulting engineers for the Malta airport project to discuss the plans and specifications which are now under way.

Pacific Northwest-Hawaii Case

The administrator appeared before the CAB in Seattle, Washington, as a witness under Rule 14 for Northwest Airlines as concerns their application for certification in the Pacific Northwest-Hawaii hearings. Most witnesses that appeared favored certification of both Northwest and Pan-AM airlines which are presently flying the run on the argument that competition makes for more reliable and better service.

TERMINAL WEATHER HAZARDS

Poor terminal weather conditions occur at times over most of the country, regardless of the season. Fog and stratus, dust storms over the southern plains and southwest, low ceilings, visibilities and strong gusty surface winds in cold frontal areas and squall lines are a few of the weather conditions which may cause hazardous terminal weather. When hazardous terminal weather conditions occur or are indicated, careful selection of routes and alternates is a necessity.

FOG AND STRATUS may frequently hinder flying operations. Fog and stratus associated with frontal systems may be encountered over most of the country, especially from late fall through early spring.

Advection-Radiation fog and stratus occur along the Gulf and southern east coasts from October through the end of April. These fogs extend inland along the Gulf Coast about 150 to 250 miles, depending on the wind speed, and along the east coast between the ocean and the Appalachians. Upslope stratus is fairly common over eastern New Mexico and western Texas. Along the California coast, fog and stratus occur most frequently from spring through fall. In most cases, fog and stratus occur most frequently during the night and early morning.

BLOWING DUST may be encountered frequently in the southern plains and in parts of the southwest. If the precipitation is light in these areas, the frequent strong, gusty surface winds which occur may cause severe dust storms.

Blowing dust can cause a terminal to go below minimums very rapidly. In planning flights into these areas, when possible dust storms are indicated, it would be wise to use extra care in choosing alternate airports.

Pilot Reports

Pilot reports of weather conditions can be of considerable help to the forecaster. The surface weather observation network still has a number of blind areas in it, and upper air observations are taken only two to four times a day. Remember that your pilot report helps the next pilot flying over the same route. When you close your flight plan, a few minutes discussing the weather encountered with the forecaster would be appreciated.

Conclusion

Although many types of hazardous weather conditions may be encountered during the year, careful flight planning and the use of all weather facilities available will result in safer flying.

HANGAR FINANCE

The Small Business Administration, acting in concert with the Civil Aeronautics Administration, recently announced a program for making loans to build aircraft hangars.

William I. Beaumont, Branch Manager of the Small Business Administration, 412 Power Block, Helena, Montana, said private lending agencies have generally shied away from making loans to finance construction of airplane hangars, although there is an urgent need for adequate facilities at many airports.

Mr. Beaumont said:

"The Civil Aeronautics Administration has informed us that there is a shortage of aircraft hangars at airports across the nation. Accordingly, we have worked out with the Civil Aeronautics Administration a program that I believe lends itself particularly well to the purchase and erection of metal hangars which are usually erected in segments of from six to ten units. Purchase and erection costs, with flooring, are reported to be from $2,000 to $3,000 per unit. We believe that this program will do much to relieve the present shortage.

Under the program, loans for the construction of airplane hangars will have a maximum maturity of 5 years. The hangars must conform with general specifications drafted by the Civil Aeronautics Administration, must accommodate at least six planes, and the maximum amount of any loan may not exceed 80 per cent of the materials and erection costs.

To be eligible for such a loan, applicants must be engaged in the aircraft business, such as servicing, sales of parts, rental of aircraft, and operating airports. If a new business is being established it must include not only the hangar facility but some other aircraft business.

The hangars may be constructed on leased land, provided the lease is for a term at least equal to the maturity of the loan.

As in other programs a direct loan will not be made by the Small Business Administration unless a participation loan with a private bank is not available.

SCOBEY PILOTS' COURTESY CAR

A courtesy car has been made available to transit pilots by the Scobey pilots, this is a convenience which increases the utility of the airplane and is characteristic of the hospitality offered by this Montana community. An airport true light beacon has been installed at the Scobey Airport and plans are underway for a hard surface runway.

REMEMBER! There are two well-known finishes for aircraft—lacquer and liquor.

CARBON MONOXIDE

With the approach of winter weather, the need for use of heating systems highlights the old problem of carbon monoxide poisoning. Recently, cases have been reported where occupants were overcome by carbon monoxide that entered through the cabin heater inlet because a hole developed in the gas heat exchangers. More carbon monoxide is present in exhaust gases when a rich fuel-air mixture is used. The opposite is true for a lean mixture. The normal cruise mixture is more ideal, but there is always some incomplete combustion, causing carbon monoxide to be present. Cracks and holes may occur in a very short time, especially with considerable operating time on the exhaust gas type heat exchanger. Therefore, it is important for owners and operators of airplanes to become acquainted with the cause, detection, and probable remedy.

In the event the occupants should feel the oncoming of a headache, drowsiness, sluggishness, or smell exhaust gases, they should: (1) Immediately shut off the cabin air heater and any other opening that might connect the engine compartment air to the cabin, (2) open a window and any other fresh air source; (3) land the airplane at the first opportunity and carefully inspect the entire exhaust manifold for holes or cracks. Since a careful inspection will require disassembly of both the exhaust manifold and the heater, the inspection should be performed by qualified personnel. If a failed heater or exhaust manifold is found, it should be replaced.

CESSNA AND AIRCRAFT RADIO PLAN MERGER

Cessna Aircraft Co. and Aircraft Radio Corp. boards of directors have authorized their executive officers to make plans for a merger of the two companies. Plans will be subject to approval of stockholders of both companies. Under a basic agreement, each ARC stockholder would receive two Cessna shares for each three shares of ARC. Exchange would not be made until after payment by Cessna of 10% stock dividend payable December 15 to stockholders of record November 19.

AIRMAN'S GUIDE, NOVEMBER, 1958
NOTAMS

Billings-Logan Field. Due to non-visibility twr unable to ctl tfc on ramp N and NE of admin. bldg. Aprox. 700' of 2nd 1000' of apch end rnwy 27 not visible from twr. Pilots will assume responsibility to determine rnwy is clear of obstns when using first 2000' rnwy 27. (9-11) N taxiway usable with caution, soft spots from ramp to W end. Rnwy 4-22—soft spots from SW end to intsxn rnwy 9-27. (9-18)

Clinton-Elliott Field. New arpt reported. Lctd 4 s mi ESE. Elev 3400' MSL. No. of rnwys. 1. Lngst rnwy & facs; turf 4000'; no lgts or facs. (10-21)

Connor-Shunk Mountain Arpt. New arpt reported. Lctd 3 s mi SW. Elev: 4233' MSL. No. of rnwys. One strip 4000', no lgts or facs. (10-21)

Great Falls Intnl Arpt. Jet barriers installed across overruns rnwy 3-21. Not yet operational. Barrier cables across overruns hazardous to acft. Use of paved overrun rnwy 21 prohibited. (10-16)

Great Falls-Malmstrom Afb-Rdar Aprnach Control. Apchs to Intnl Arpt restricted to VFR for test purposes. (11-1).

Helena Arpt. Rnwys 5-23 and 7-25 restricted to 35,000 lbs. gwt. Rnwy 11-29 restricted to 50,000 lbs. gwt. single wheel or 70,000 lbs. gwt dual wheel. (5-28).

Kalispell Mun Arpt. Closed until approx April 15, 1959. Lgts & serv discontd. (10-24)

Lewistown-Radio. About Nov 17, VOR/DME will be shut down until approx Nov 28—freq. change to 112.0 MC. (10-23)

Missoula-Radio. VOR/DME coverage. Limited to 17 mi minimum.

Missoula County Arpt. Taxi strip between rnwys 25 & 29 clsd. Rnwy 2-20 clsd. Rnwy 7-25 clsd to acft over 26,000 lbs. gross wt. Last 1300' rnwy 29 unusable for acft over 26,000 lbs. (10-24)

Mullan Pass-Radio. Caution—E course LF rng has multiple spread 7° at 35 n mi, W course has multiple spread 7° at 30 n mi which progresses outwards with distance.

LOOK FOR THE DIFFERENCES
Rules at Strange Airports Often Differ From Those at Home

The CAA proceeded against a pilot who took off from an airport in a direction opposite to that indicated by the segmented circle marker. The pilot testified that he took off in the direction indicated by a freely swinging windsock, and that he did not see the segmented circle marker. He admitted that he saw another plane taxiing in a direction that would show an intention to take off from the opposite end of the runway.

In approaching a strange airport, be sure to observe traffic and see what pattern is being followed. If there is no traffic, careful observation should be made to see if there is a segmented circle marker or other device to indicate the direction of landings. It is not a defense for the pilot to say that he did not see the marker—if there is one, he is presumed to have seen it.

While on the ground at a strange field, the pilot should inquire about local rules. Unexplained actions of other planes may indicate special requirements. In the case described, the fact that another plane was taxiing to the opposite end of the runway should have alerted the pilot to the fact that something was amiss.

FLYING FARMERS ANNUAL MEETING

The Flying Farmers & Ranchers Association held their annual meeting at Red Lodge in October at which time Arnold Simenson of Kremlin was elected President and Mrs. Rosella Tempero of Warden was re-elected Secretary.

Official action included a recommendation to the Montana Aeronautics Commission to name the Border Crossing Airport at Coutts and Sweetgrass "ROSS INTERNATIONAL AIRPORT" in recognition of an early day Canadian Flying Rancher of that area.

FOR SALE

Piper Cruiser, 1946 PA12, 100 Hp. Lyc. with cross over Exhaust. 770 hrs. SMOH, Air Frame 1250 Hrs. Fabric checked first Green August, 1958, Radio, Lately reconditioned metal prop. Colors silver with red trim. Fair glass, good tires. Very fine performing. Contact Cut Bank Flying Club, P. O. Box 1371, Cut Bank, Montana.

90 Hp. 7CCm, Aeronca Champion. License until March 20, 1959. Write Edwin Johnston, Malta, Montana.

170-430hrs. SMOH, two tone enamel, wheel fenders Big Spinner, 8 day clock, T.B. s/a R/c, R/I, A/H. PAR1A-10-A- with D.f. Loop, UHF Receiver, new tires. Contact Al Rise, Conrad, Montana. Phone CR 8-5202.

15AC Aeronca Sedan 280 hours since major, metal prop. 2-way radio. E.D.F. 800 hrs. Total Time Fabric. Top shape, always hangared. This is an excellent mountain airplane. Contact Clarence J. Larson, 435 W. Sussex, Missoula, Montana.

Cessna 170—1955. Exceptionally clean. $5,500.00. Contact Darnell Flying Service, Glasgow, Montana.

Newly rebuilt Piper PA-12. Irish Linen. Buty. dope. First 100 hr. just completed. Sac. green, white trim. $2,650.00 Contact Darnall Flying Service, Glasgow, Montana.

Aeronca Chief. Rebuilt and recovered, Irish Linen, Buty. dope—one year ago. $1,675.00. Contact Darnall Flying Service, Glasgow, Montana.

Aeronca Champ—90HP—Good condition. $1,750.00. Contact Darnall Flying Service, Glasgow, Montana.

WANTED TO BUY

Airplanes to re-build or re-cover or with run out engines. Contact Henry F. Mrine, Dillon, Montana. Phone 095-J-3.

Good used Narco Superhomer VHT-2 or VTR-1 Omnigator. Antennas not necessary. Write H. F. Cornwell, Forsyth, Montana.

WILL SELL OR TRADE

1941 Taylorcraft BC-12, 500 hrs. since major on 65 continental, runs perfect. New windshield and upholstery. Good fabric and tires. Will trade on good Cessna 140, Luscombe 8F or other. Sell for $995 c/o Dillon Flying Club, Dillon, Montana.

1956 Fiberglass Taylorcraft—4 place 250 hrs. total time. McCauley constant speed prop. Will take 2-place trainer in trade. Contact Mac Johnson, 225 South Montana Ave., Helena, Montana.

Trade your Cessna 120 or 140 wings in need of recover for ours. We have one set of 120 wings with metal cover and one set of 140 wings with Irish Linen cover and butyrate dope. Call or write Flight Line, Inc., Box 97, Belgrade, Montana. Phone 52, Al Newby

---

CAA QUARTERLY INSPECTION ITINERARY

	Oct.	Nov.	Dec.
Big Timber		5	
Billings	6, 13, 20, 27	3, 10, 17, 24	1, 8, 15, 22, 29
Bozeman	16		11
Butte	15		10
Glasgow	8	12	10
Glendive	15	19	17
Great Falls	8*, 9**	19*, 20**	3*, 4*
Havre	22		
Helena	6, 13, 20, 27	3, 17, 24	1, 8, 15, 22, 29
Lewistown	22		
Miles City	16	20	18
Missoula	29*, 30**	19*, 20**	17*, 18**

---

*Written examinations only.

**Flight tests only

U. S. POSTAGE
PAID
HELENA, MONT.
Permit No. 2

MONTANA AERONAUTICS COMMISSION
ORO Y PLATA

News Letter

P. O. Box 1698
Helena, Montana

Mrs. Loretta B. Peck
School of Mines
Butte, Montana